

CHAPTER I

THE MURNGIN

THE northern shores of Australia are separated in the east from New Guinea by the Torres Strait and the Gulf of Carpentaria, and in the west by the shallow Sea of Arafura. The Indian Ocean lies between Australia and the East Indian island of Timor. Below the Arafura is Arnhem Land, that almost blank space on the map which extends from the Gulf of Carpentaria to the Indian Ocean. In the furthestmost northern and eastern parts of this latter region are several tribes which may be referred to collectively as the Murngin. Their ancestors lived here many hundreds and probably thousands of years before them.¹

Eastern and northern Arnhem Land are unpopulated by whites except for a half dozen or more missionaries who are stationed at three comparatively recent Christian outposts. Traders infrequently sail their two-masted luggers into the shallow harbors and mouths of the tidal rivers to exchange their goods with the natives; all other economic efforts have been unprofitable. On the southern borders of this huge territory white civilization is making a melancholy and profitless effort to implant its own markings in the form of cattle ranches on the bleak country that lies along the southern banks of the Roper River. A telegraph system which unites white Australia with the rest of the British Empire stretches from the populous cities of southern Australia across the barren central desert into the western border of Arnhem Land and terminates at the tiny, isolated town of Port Darwin.

The Murngin live some ten to fifteen degrees south of the equator in a land which has little elevation. The climate is tropical and marked by the sharp, seasonal cycles of the rainy and dry periods, with corresponding changes in the prevailing winds or monsoons. The long flat coastal regions have a savanna type of vegetation, with the ubiquitous mangrove here and there forming dense jungle groves along the flat sandy islands, bays, and tidal rivers. The groves of ti trees in this region are green oases which the native sees as he journeys in from the barren

¹ See Appendix I, Social Change in North Australia.

A BLACK CIVILIZATION

133 alkaline plains and approaches the marshy lakes that are abundantly present in the rainy season and frequently absent in the dry period. 137 The acacia and the eucalyptus are familiar and frequent in both the low and the high lands, and spear grass covers the land in dense growths during the months of rain.

136 The animals, with certain minor variations, are the usual marsupials and monotremes found in Australia, with the bat and wild domestic dog the only mammalia living in the region. Nature is bountiful with

[262] many varieties of birds, fish, and other animals; but vegetable foods, although plentiful, are limited in variety.

144 The Murngin people belong to the aboriginal Australoid race found throughout Australia—not Mongoloid, Negroid, or Caucasian, but a variant group which seems to be a blend of many of the features of the white and black races.² Their language is one of the Australo-Dravidian linguistic group. They belong to a Stone Age culture; were they placed [192] in our own chronology, their technological development would fall 105 somewhere between the Old and the New Stone Ages.

The Murngin civilization is a simple Australian culture with a small hunting and gathering population which lives off the sea and the land. The natural environment which surrounds it and drastically affects native behavior consists of *two changes which make up the yearly cycle*; one of these is extremely rainy, producing a period of scarcity, and the other a dry period when there is an abundance of food. The technology can be described briefly as the adaptive mechanisms of the general society to these two parts of the cycle of nature.

614 The social organization must be given in a more detailed description. 923 The fundamental basis of the society is an elaborate kinship³ system in which everyone is related to everyone else. This kinship system is organized into more general units which are patrilineal,³ exogamic³ clans³ which have local territories that were "given to them by the totems."³ All parts of the clan land have totemic references. Each clan has multiple totems; all clans have at least one, possibly more, sacred water holes where live the high totems, the totemic ancestors, the ancestral dead, and the totemic spirits of the unborn. The names of all clansmen have totemic significance, and the whole general totemic pattern is related to the clan.

[101] ² See Appendix VII.—The term "Black" in the title of this book, *A Black Civilization*, is not to be interpreted as describing these people as purely Negroid. The term refers, rather, to their popular name, "Australian Blacks," and to the name they accept for themselves from the Australian whites, "Blackfellows."

³ See Glossary of Technical Terms, page 366.

A BLACK CIVILIZATION

132 In the rainy season great torrents of tropical rain fall daily, making
 312 large portions of the mainland south of the Arafura Sea, for weeks
 and sometimes months at a time, a series of islands in a shallow sea
 of mud and water. Then, with rare interruptions, there is continuous
 drought for six or seven months. During the wet season tropical vege-
 [137] tation has sprung up everywhere; giant spear grass sometimes grows
 to twelve and fourteen feet in height, covering all the country and paths,
 making communication a difficult matter at best, and in many places
 impossible. The water recedes, the water holes become drier and drier,
 and a large number disappear entirely; birds and fish are gone, and the
 many varieties of lilies and yams disappear. It is then that the native
 appreciates the value of water, just as before he realized the harm it
 could do him. It is doubtful if anyone ever died of thirst in this coun-
 try, but it is certain that many have felt its pangs. Deaths have oc-
 [823] curred from the great floods. It is small wonder that with the food
 and drink of life dependent on the water holes, and possible death
 resulting from the great floods, the native has made water his chief
 symbol of the clan's spiritual life.

312 The water hole may be an ordinary small lake or billibong, a river
 778 or creek flooding through the domain of the clan, a spring of water,
 or a native well or water hole; and in a few cases it may be the ocean
 itself, but this last form is usually associated with a tidal spring.* All
 the water holes found in the territory of a clan are divided into two
 classes: they are either garma wells or narra (ranga) wells. The first
 are totemic but not sacred; they were made by the lower order of
 totems, whose emblems may be displayed in camp and seen by the
 women. The narra wells are always sacred; they were made by the
 higher wongar totems, whose emblems are ranga (higher emblems)
 and can be seen only by the initiated young men after the age of
 puberty. A clan always has at least one and sometimes three or four of
 the latter.

778 The narra water hole is usually not taboo to women. They may
 [562] obtain water there, bathe in the pool, and possibly fish or gather
 yams and lily bulbs. Occasionally a well becomes so taboo that no
 woman is allowed near it. Such is the great well, Mir-rir-min-a, of the

[192] *The following native terms are used: a water hole or well, mang-o-tji (literally,
 eye); a spring, mil-min-jerk; river, man-i (literally, throat); creek, par-ka; a small
 rill running from a spring or artesian well, ri-el-la; billibong, lun-mi (upper thigh);
 rock-basin water, gar-ra (rain) nar-ku-la (water); fresh-water bog, mar-a-ka; saline
 but drinkable bog water, gal-la-min-diri; the ocean, or salt spring, or any salt water
 which is undrinkable, ka-pu mon-ok (water salt).

AN INTERPRETATION OF MURNGIN TOTEMISM 379

Because of

the combination of heavy drought and poor soil, the coastal plain of northeast Arnhem Land has hardly any jungles except patches of mangrove and palms, and is unlike New Guinea and other tropical areas of heavy rainfall in its vegetation. The vegetation has created monsoon or savannah forests which are found throughout the watered parts of the area except where soil erosion has created salt deposits which prevent tree growth. The characteristic trees are many species of eucalyptus, mangrove, acacia, ti trees, pandanus and cabbage palms. The whole country in the proper season is buried in a luxuriant growth of spear grass which grows at times to heights of ten to twelve feet. 137

The rainy period begins approximately in November and ends in March, although heavy thundershowers and oppressive heat start in October and are also found in March and April after the heavy-rain period has passed. The dry season of five to seven months is one of drought and there is usually no rain at all from May through September, and very little in April and October. The rains belong to one type, since they are all caused by the monsoon Low coming from the northwest. The months of maximum rain are January and February. Although the rain comes from the northwest, it moves from the west more than from the north.² 132

² Taylor, Griffith, *Australian Environment Memoir No. 1*, Commonwealth of Australia, page 69. To avoid all possibility of including my own or Murngin preconceptions, there is given below, in preference to my own summary, the summary of a statement by Griffith Taylor (one of the foremost authorities on Australian climate and geography) on North Australian meteorological phenomena. His description is purely from the point of view of a scientific geographer.

The yearly rainfall ranges around fifty to sixty inches, but since most of this occurs in two or three months it does not give a true picture of the amount of rain that falls daily during this short period. In January and February some fifteen inches are precipitated monthly, and in December and March ten to eleven monthly. The following chart gives some idea of the rapid rise and fall of the rain from a little over two inches in October to some ten inches in December and fifteen in January, and the almost as rapid drop when the rainy season ceases. The following account of the seasonal change in Darwin (taken from Taylor's *Australian Environment*, page 70) describes very adequately the dry and rainy cycle as it is found in the Murngin country of northeastern Arnhem Land.

"The different changes of these seasons are so uniform and regular that they may be predicted almost to a day. Signs of the approach of the wet season appear immediately after the sun has crossed the equator during the spring equinox, in September, when the strong E.S.E. monsoon—which has been blowing continually throughout the dry season—ceases, and is succeeded by calms, and light, variable winds; the weather becomes intensely hot, and small thunderclouds gather over the land, increasing in size and density day by day until they burst into terrific thunderstorms, accompanied by hurricane squalls of wind and rain. These squalls, at first, take place every four or five days, gradually increasing in numbers until the end of November, when they occur

177 how to make it. There was no arduous labor attached to collecting turtle
 412 shell to trade for an axe, for the shell came as a by-product to the pursuit
 of harpooning turtles. The making of the stone axe took time and a considerable amount of hard labor; but to go turtle hunting was a pleasure, since turtle harpooning expeditions are not only for the anticipated enjoyment of the flesh and to supply the family larder, but also for the pure joy of stalking the turtle, spearing it, and bringing it home to an admiring audience which could appreciate one's abilities as a hunter and a man of importance. Undoubtedly pride of workmanship is felt by a native axe-maker. His fellow tribesmen always express their appreciation of a well-turned-out axe or spear head, but the social approbation given to the two occupations is completely disproportionate.

[461] 177 The turtle shell had never been used, and had been discarded until the
 439 Malay came; that it should become an article of high value to the trader was an item of some amusement and a fortuitous circumstance for the aborigines. Since the women gather oysters, the trading of pearls for the Malay objects of trade was looked upon by the black as an even greater bit of luck than the trading of shell.

177 The trepang (*beche-de-mer*) industry demanded more effort. In this
 225 activity the Malay showed himself a practical sociologist, for he again
 439 made no vain attempt to change Murngin civilization to his liking, but merely used the institutions he found among them to satisfy his wants.

Canoes were given to certain men who, with their clansmen, gathered the sea slugs from the low-lying sand banks at low tide. All this the native understood, since it was but one added particular to a general type of behavior; and although the blacks do not eat trepang, this animal belongs to a group of seashore fauna which are gathered and eaten, and could have been added to the diet without any change in the methods of acquiring food. But there is one element in the economic structure of Murngin civilization that must have made this adaptation somewhat difficult, since the sexual division of labor allots the task of gathering mollusk and other seashore foods to the women. Men only gather these articles of diet for their own use when they have no women with them and there is nothing else to eat. It is very likely that if the natives could not have speared fish or harpooned dugong or turtle while looking for trepang beds, the Malays would have found the industry unprofitable, if not impossible.

175 The Malay brought the tamarind fruit with him. The seeds that were
 137 thrown away sprouted, and now the lands where he voyaged are known by their growth of the tamarind tree. Many of these trees are very large. The circles of trees which surround the spot where once a huge tamarind tree had grown show that they are secondary growths and do not represent the earliest period of the Malay contact. No one knows how long the Malay
 174 has been making his voyages to Australia. The writer attempted to find

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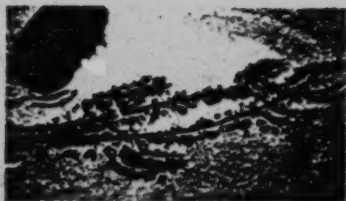


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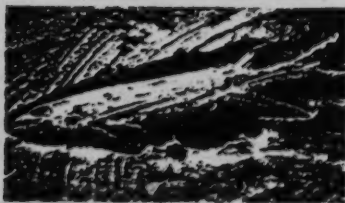


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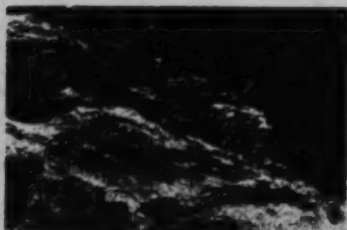


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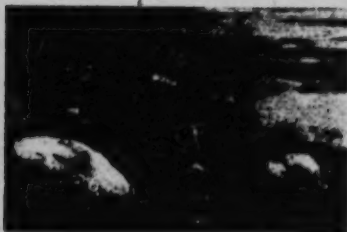


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PLATE 91. Totem places and sand figures, Yirrkalla

- A Casuarina tree, Jalboa
- C Sand drawing, gurna
- E Cliff at Jalboa

- B Fig tree, Jalboa
- D Sand figure, fish
- F White stones, milarik, Jalboa

THE ART OF YIRKALLA

After performing the dance of the tiger snake, *dunbania*, they each painted the death mark of the snake on their faces³ and cast their spears at the sleeping man. These passed through both his chest and carrying-bag, killing him instantly.

The two brothers, waiting until the wives of *Djunmundia* returned from food-gathering, captured them and, putting them aboard the canoe, paddled to an island north of Bremer Island. During the night, however, the women escaped, swam to the mainland, and told the *Bukalatji*,⁴ relatives of the murdered *Djunmundia*, how their husband had been murdered. When the two brothers discovered their loss they returned to their camp on Bremer Island.

During the next few days the *Bukalatji* worked hard making a number of bark canoes. Waiting until there was no moon, they launched them and paddled to Dambalia. Leaving their canoes to the north of the island, the *Bukalatji* crept through the low scrub to surround and kill *Tjuna-tjuna* and *Wururunga*. But the brothers heard them and, in their flight, came by chance on the bark canoes, which they started to cut to pieces with the large steel knives which the Malay had given them. They had almost finished their work of destruction when the head man of the *Bukalatji* came up and begged them not to destroy his own canoe, so that he could take all of his people home. The brothers relented and allowed the *Bukalatji* to depart.

After some time the two brothers left Bremer Island and went to live near Cape Wilberforce, where they met and married two women from the nearby islands. The wives were out collecting oysters one day when the *Bukalatji* again attacked the brothers and this time succeeded in killing them. This so enraged the women that they attacked the *Bukalatji* with the knives belonging to their husbands and killed them all. *Tjuna-tjuna* and *Wururunga* were then transformed into goannas and their camps on Bremer Island into trees. Between those trees there is a path, which must be kept clean by the local aborigines.

On Pl. 98A the two brothers, at *a*, are paddling their canoe to the mainland. On the left, at *b*, they are holding their spear-throwers and avenging spears in their hands. The elder brother, *Tjuna-tjuna*, is on the right. At *c* is their enemy, *Djunmundia*, transfixes by the two avenging spears, one of which has passed through both his chest and his carrying-bag (cross-hatched oval). In the lower right panel *d*, black circles enclosing the goannas are totemic trees mentioned in the myth; the parallel lines, the path between them; and the curves, nearby sand-hills.

The Man, Balonarati, and the Paper-bark Trees of Matamatani

Between Trial and Caledon Bays is a river, Gaimmaui. Near this river is the Matamatani swamp,⁵ about half a mile across and filled with paper-bark trees.

3. The death mark, shown on the carved and painted head of *Banaramin*, Pl. 139D, E, is painted on the faces of all the men who take part in an avenging ceremony.

4. These are the mythical people who killed *Muruna*, the fisherman. See Pl. 96D.

5. This swamp is also mentioned in the myth of the three men and the bush-fire, Pl. 93B.

THE ART OF VIRKALIA

dubur. This is the totemic place of the mythical man *Balonarati* and the paper-bark trees.

During the early days of the world *Balonarati* invented the method of preparing *natu* from the fruit of the cycad* so that it would be fit for human consumption. *Balonarati* first broke the shells, pounded the kernels into flour, placed the flour in a finely-woven basket and soaked the food for three days in running water to remove the poison. At the end of that time he stripped sheets of paper-bark† from the adjacent trees and taking the soaked flour from the water, wrapped it in the paper-bark and allowed it to drain for several hours. After this treatment the flour was ready to eat. *Balonarati*'s invention, still in use, ensures a plentiful food supply for the aborigines. The place where the mythical man prepared the cycad flour, *natu*, is now a swamp filled with large paper-bark trees, some of them still bearing the marks where *Balonarati* stripped the bark from them.

Two bark paintings, although somewhat similar in design, illustrate different aspects of the same myth.

On Pl. 98C, the transverse bands *a* and *b* are sand-banks on the River Gahmanai, and *c* the main track between the north and the south of Caledon Bay. The lozenges are the paper-bark trees in the swamp, and the dots on the ends of the lozenges, fine white dust in the bark which the wild bees collect and carry to their hives. The cross-hatching indicates the pieces of bark lying about the base of the tree after the stripping is finished.

Plate 98B represents an individual tree at Matamatani. The lozenges on the upper and lower panels indicate places on the trunk from which *Balonarati* had stripped the bark, and the dots, like those on the previous painting, the white dust which the bees take to their hives. The cross-hatched bands surrounding the two panels indicate the upper part of the tree which the mythical man, being unable to reach, could not strip of its bark.

The Man, Ruatko, and the Turtle, Muratu-muratu, at Cape Shield

The *jiritja* man *Ruatko* lived, during mythical times, on the beach at Cape Shield. He ate only the eggs of turtles and sea-birds.

On Pl. 98D the central panel is the track of the female turtle *muratu-muratu*, the herring-bone design being the marks she made in the sand as she crawled from the water to lay her eggs. The inner oval at *b* is the sand disturbed by the turtle in the preparation of her nest, and the dots in the outer oval her eggs. On his way to the turtle nest (see footmarks, panel *c*), *Ruatko* collected the eggs (dots in panel *c*) which the four black seagulls had laid on the path. His returning footmarks are shown in panel *d*. The horizontal groups of wavy lines *e, e, e*, are the marks made in the sand by the sand-crabs, *gunjun*, and the semicircles

6. This fruit is poisonous if eaten in its raw state.

7. Paper-bark, being particularly soft and flexible, is used for a wide variety of purposes.

8. Interpretation by F. D. McCarthy.

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6: Berndt E-5 (1946-1947) 1951

OI17 Murngin OI17

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[for captions, see category 116, p. x]

PLATE II

[Facing p. XXXii]

6: Berndt E-5 (1946-1947) 1951

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[For caption see category 116, p. x]

PLATE III

[Facing p. 1]

CHAPTER I

THE CULTURAL PATTERN OF NORTH-
EASTERN ARNHEM LAND SOCIETYa. *The Geographical Background:*

The main centre with which we shall be dealing here is Yirrkalla, 131 in the far north-eastern corner of the Arnhem Land Aboriginal Reserve. The surrounding area is thickly wooded, with jungles and mangrove swamps, fresh water streams and tidal rivers, long beaches broken by sheer cliffs, and occasional islands fairly close to the shore. 133 137 ●

Yirrkalla itself takes its name from a fresh water creek that flows into the surf beside a long white curving beach. This creek drains a wide area of lagoon and swamp, its source far back in the hilly inland. Wide grass flats, easily inundated during the monsoonal rains, and dense jungles, lie in the back country not too far from the coast line. At Yirrkalla the Methodist Overseas Mission established a station some eleven years ago: and now a Mission house on a low cliff dominates the beach, where native huts, mostly of cast-off European timber and tin, are arranged in rows. Beyond the Mission house, on a smaller beach, are other huts; and a church, store-house, dispensary and garden complete the settlement. 103 132 797 342 177

This Mission station is the centre for natives whose traditional home camps are at Blue Mud Bay, Trial and Caledon Bays and Port Bradshaw to the south, facing the Gulf of Carpentaria, while visitors come from Groote Eylandt, Woodah Island and Rose River. The Yirrkalla local groups belong mainly to Cape Arnhem, Bremer Island, Melville Bay, and the English Company Islands, as well as to Arnhem Bay: but natives from the Wessel and Elcho Islands, Milingimbi in the Crocodile Islands, and from the mainland to the west, do visit this region. Yirrkalla is thus a strategic base for anthropologists and missionaries who desire to contact members of various groups of a more or less similar cultural and linguistic background. 131 797 122

Geographically speaking, the Yirrkalla groups are comparatively isolated, for to-day only the Mission lugger calls at this depot, with occasional visits by other Europeans who come by boat and plane. Yirrkalla is approximately 500 sea-miles east of Darwin, 130 miles

6: Berndt E-5 (1946-1947) 1951

OI17 Murngin OI17

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● 137
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[Facing p. 64]

PLATE VI

[For caption see category 116, p. xi]

6: Berndt E-5 (1946-1947) 1951

OI17 Murngin OI17

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PLATE IX

[Facing p. 81]

[For captions see category 116, p. XII]

6: Berndt E-5 (1946-1947) 1951

O117 Murngin O117

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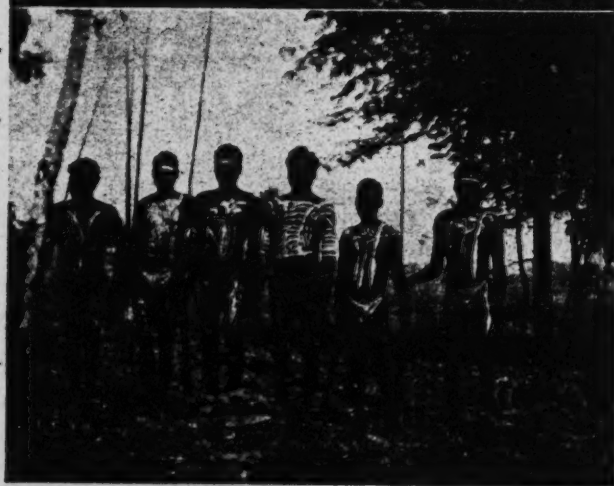


PLATE X

[p. 84(A)]

[For captions, see category 116, p. Xii]

ARNHEM LAND

[2] period to the present day. We shall follow the contact of the Aborigines with alien peoples, review the repercussions, and notice something of the effects upon their traditional culture.

[3] The Arnhem Land Reserve, one of the largest in Australia, stretches east and south-east of Darwin in the Northern Territory, across to the western shores of the Gulf of Carpentaria.

[3] The mangrove-lined coast on the north faces the Arafura Sea, separating Australia from the densely populated islands of Indonesia and New Guinea; and adjacent to it, running from west to east, are the islands of Croker, Goulburn, Wessel and Bremer (once Melville). Into the sea here and there flow large rivers, which further inland are usually banked by thick jungles of cypress, gum, stringy-bark, wild fig, bamboo, cycad, screw-palm (pandanus), and many other trees and bushes known only to the botanist and native. And tidal salt-water creeks flow among the mangroves, the home of sea-birds, crocodiles and sharks.

[3] On the east the same almost monotonous coast-line fronts the Gulf of Carpentaria, dotted with such islands as Woodah and Bickerton, Winchelsea and Connexion, close to Groote Eylandt.

This great Reserve is bordered on the south by the Roper River; and on the west a natural boundary of rocky hills and sandstone halts the encroaches of the buffalo hunter, who has established himself on the fertile plains and swamps around the Adelaide, Mary and Alligator rivers. In the heart of Arnhem Land, gorges, mountains, swamps and rocky plains spread through country still partially unexplored.

[19] Scattered through the Reserve are Mission settlements controlled by the Church Missionary Society and the Methodist Overseas Mission—Oenpelli, Croker Island (a "Half-Caste" settlement), South Goulburn Island, the Crocodile Islands (Miltingimbi), Elcho Island, Yirrkalla, Groote Eylandt, and Roper River. To the south-west, Beswick Government Cattle Station and Maranboy Reserve can barely be said to be in Arnhem Land properly. Near the western border of Arnhem Land, in the so-called "Buffalo country", are two unoccupied Aboriginal Reserves, the Manasi and Woolwonga; and on the south, the attraction of neighbouring cattle stations (such as Mainoru and Roper Valley) has contributed to the decline of the local population.

BACKGROUND

Once the term "Arnhem Land" was applied to the whole region east of Daly River, including the area about Darwin and Katherine, Melville and Bathurst Islands, and the "Buffalo country";² but since the Aboriginal Reserve was established, the name has been restricted to this. 131

All through this region, except in parts of the interior, there is no scarcity of food. In the rivers are fresh-water fish, goannas and crocodiles, in the sea and coastal bays many varieties of fish, shell-fish, turtle, dugong and (rarely) whales. At certain seasons the swamps and rivers, streams, waterholes and jungles, teem with wild fowl; eggs are plentiful, and (according to the time of the year) there is a choice of duck, goose, tern (or sea-gull), crocodile, turtle, emu and jungle fowl. Inland and along the coast there is an abundance of meat - kangaroo, wallaby, opossum, bandicoot, porcupine and edible reptiles. Moreover there are introduced water-buffalo, which abound in western Arnhem Land, and are seen today as far east as Yirrkalla, near Cape Arnhem. 262

Wild honey, fruits, berries, seeds, nuts and vegetable foods such as yam and lily roots and green lily stems, are available in season. And at the tail end of the monsoonal period the sea brings to this coast, particularly on the north-east, large supplies of drifting coconut and other edible nuts. 137 • 262

This, then, is roughly the position of the Arnhem Land Reserve, and it is upon the natural products of this country that the Aboriginal inhabitants have in the past primarily depended. Today, however, the Aborigine does not rely solely on his environment for subsistence. Long years of alien contact have developed in him a desire for introduced goods, a desire which was fulfilled to some extent when the Mission stations were established. 177

In order to examine the picture more closely, and to see the events presented in some historical sequence, we shall concentrate on the northern and eastern coast of Arnhem Land, and the adjacent islands within the Reserve. This coast-line and these islands experienced alien contact much earlier than did the inland boundaries, along the Roper River and the "Buffalo" plains. The actual interior of the Reserve, except for the bush country towards the Rose River in the south-east, the Arafura and Milin- [177]

57 *opposition* between groups, which, in the absence of some
619 powerful motive or urge, must tend to restrict communication between people who are situated at any distance from one another.

133 Let us consider, first, the country and its natural resources.

Arnhem Land is a vast territory, still in its virgin state. The terrain is rugged. There are no high mountains but only low hills, which, except on the western fringe, rarely exceed four or five hundred feet in height. These hills, which often outcrop with bare rock, give an arid, even desolate, appearance to the country. Undulating lowlands and broad plains stretch for hundreds of miles. These are more fertile, and
[137] are covered either with a dense growth of long grass or with savannah woodland. They are intersected by numerous watercourses, which in the dry season become mere dry ravines with a few deep waterholes. In the wet season these river courses are raging torrents.

813 The natives are familiar with the various botanical (eco-
824 logical) associations which characterise this territory, and distinguish these by special terms. They can name, without hesitation, the characteristic trees, shrubs, and herbaceous plants in every association, as well as the food plants and animals, and the raw materials used in technology, which at any season of the year¹² they obtain from each of these associations. In this we see a system and an orderliness

¹² Some idea of the critical knowledge of their territory and its resources which the Australian aborigines possess, and of the systematic way in which they classify these resources, as well as their appreciation of the influence of the seasonal cycle on their life and economy, may be gathered from the following accounts of the people of the neighbouring territory of Cape York Peninsula:

Names and Naming in the Wik Murgan Tribe (in press) and *The Seasonal Factor in Human Culture*, Proc. Prehist. Soc. July-Dec. 1939, No. 10, pp. 209-221.

221 pations, and therefore, on the nature of their camps and
 805 house types. It may be noted in passing that the seasonal
 813 influence on their lives and occupations is well appreciated
 by the natives themselves, and that they divide the annual
 cycle into six or more phases or seasons which they name
 from the winds, the weather conditions, or from the food
 supplies which characterise them. And again, they will
 name these phases, and state without hesitation the appropriate
 occupational sites at each of them, and their activities
 and food supplies which depend upon these seasonal conditions,
 with an insight and a precision that no white man who is not a
 trained ecologist and well versed in botany and zoology, could
 approach.

- [133] During the wet season the river courses rise quickly and
 221 soon overflow their banks so that the country is flooded for
 137 miles. The grass, especially on the plains, grows rank and
 342 high—often more than six feet—and the people are concentrated
 361 in semi-permanent wet season camps in which the population may
 exceed one hundred. Here they lead an almost sedentary existence
 in contrast with their active nomadic life in the south-east season.
 At this time they construct houses, sometimes of large size—thatched
 with bark of tea-tree (*Melaleuca*) or of stringybark (*Eucalyptus tetro-*
 [352] *donta*). Some of these houses are well built and are provided
 [372] with sleeping platforms under which fires can be lighted as
 a protection against mosquitoes. They are also equipped with
 racks to carry food and utensils. Each house type has its own
 traditional form, type of construction and distinctive name,
 and is often developed in adaptation to a particular environment,
 or is determined by the building materials available in the vicinity.
 Nine or ten types of houses or shelters are recognised in
 Arnhem Land. These vary from simple breakwinds built on the
 windward side in the "dry"

carried out locally and under close control, so that the "grass burn" season conducted by each horde, or hunting group, is prolonged sufficiently to yield its full food potential over a period of weeks or months, without waste. 224

By the time the burning of the grass has been completed, another phase in the cycle is reached. The group may now follow the watercourses, which are gradually drying up, and employ the special fishing methods which tradition (backed by a long period of trial and error) has established, as being appropriate to the area and to the season. They secure fish, freshwater tortoises and snakes, by swimming "drives" and by the use of dams, weirs, traps, nets, and special poisons containing chiefly *rotenone*, *saponin* and *tephrosin*, which, as the volume of water becomes restricted, can now be used effectively to stupefy the fish. One of the most effective of the fish poisons used by these people is *moiyono* (*Tephrosia leptoclada*)* a leguminous plant with a root shaped like a small parsnip. This plant, of which specimens were examined at Rothamstead Experimental Station (Herts. England) was found to be highly toxic in solutions of 1%. Later again, the groups which have been hunting independently during the early south-east season, will converge on the few deep permanent lagoons, where the camps increase in size as they are augmented by other groups of people who have been similarly engaged in nomadic hunting. 221 226 227 278 [137]

At this time the chief food of the natives inland will be *nätn*, the fruit of the Cycad Palm (*Cycas media*), which in this area yields very large quantities of food. In coastal 137 262

*A second species of *Tephrosia* hitherto undescribed, also called *moiyono*, collected during the expeditions in Arnhem Land on which this work was carried out, has since been named *T. Arnhemia* by Mr. C. T. White (Government Botanist, Queensland).

137 zones, *rakai*, the corms of the Tall Spike Rush (*Heliocharis*
 262 *sphacelata*), to which reference has already been made,
 form the staple food. At the same time, communal fishing
 226 drives—almost the only large scale hunting activity in which
 476 men and women work together—are organised. Most other
 communal enterprises, except those of a ceremonial nature,
 are carried out by groups of men or of women working
 [587] independently. In most cases the actual procedure follows
 [554] so closely a traditional pattern that little actual leadership
 [602] is required and this is generally accepted as the responsibility
 of the most senior and experienced of the older men
 who stand in the correct kinship status to the group in
 whose territory the hunting "drive" is carried out. Because
 these methods are traditional and are therefore regarded as
 a recapitulation of a pattern laid down by the ancestral
 culture heroes, the leadership is nominal and generally
 unobtrusive.

592 Each family—the group consisting of a man and his
 wife or wives and their young children—lives as a separate
 unit within the camp. It generally makes its own hut, shelter
 or breakwind according to the season, but the essential
 thing is that its life is centred around its own fireside, and
 that each family group cooks its own food, and lives as an
 independent and self-contained group within the horde. As
 a rule only one regular meal is eaten in camp. This is at
 night after the people have returned from the day's hunting.

591 There is no single women's camp, and up to the time of
 593 marriage a girl remains with her parents and shares with
 883 her mother the work of gathering vegetable food, and of
 food preparation, the making of bark houses and the getting
 of wood and water. But in the case of a boy, after commencement
 of his first initiation rites, at about the age of
 puberty, he leaves the fireside of his parents and goes to
 live in the single men's camp.

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134 humus are swept into the swamps or out to sea. The residue
 132 from this fierce erosion is the typical clay, gravel, and stone
 of Arnhem Land. Nevertheless, with the first cloudbursts,
 the harassed country makes an astounding recovery. In an
 • 137 incredibly short time a thick growth of high coarse grass
 136 covers the rocky hills and sandy valleys, yams spring to life
 on gravel slopes, and animal and bird life is rejuvenated;
 red kangaroos, agile wallabies, opossums, mice, snakes,
 goannas, emus, jungle fowls, ducks, geese, spoonbills, herons,
 brolgas, and many more in kind grow fat and lazy from the
 132 lavish hand of nature. But the vicious circle is not to be
 avoided. Winds swing back to the south-east and the night-
 mare of poverty again creeps over the land.

123 Exploring in the north-east brought us into contact with
 most of the scattered hordes so frequently referred to as the
 'Killers of Arnhem Land'. In early September we were in
 the English Company's Islands, with the crew on the look-
 out for Yulengor; and when they saw a thin column of
 smoke on a beach, conjecture was rife as to who was in the
 camp. A dozen men and boys paddled out in their big
 dug-out canoes and came aboard somewhat diffidently.
 However, they were soon squatting round the hatch ex-
 changing news with the crew, all the time passing the one
 [276] and only bush pipe backwards and forwards and drawing
 deeply the first tobacco smoke they had tasted for months.
 Most of them were strong and well developed, with bushy
 hair, but not too clean. As a concession to the white man
 [291] they had donned strips of bark on string waistbands. They
 were reserved, but interested in all we did, and gladly
 accepted a couple of tomahawks, wire for fish-spears, and
 fish-hooks.

628 After the visitors had cast-off in their canoes, a crew-boy
 684 mentioned that our visitors had just returned from killing a
 682 man in revenge for the death of another in the hills behind
 our anchorage. It was a long story of intrigue and murder,

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262 Lagoons overflow in the wet season and hundreds of acres
 [133] of low-lying land are under water. It is country where water-
 [222] lilies grow in profusion. Women dive for the root-stocks
 [252] and roast great quantities of them. Lily seed-pods are eaten
 raw, sieved through network dilly-bags, or ground between
 stones and baked into cakes.

The most palatable of all vegetable food is probably the
 corm or swamp rush, 'rarkai', and these swamps are famous
 [137] throughout Arnhem Land. Rarkai rushes cover brackish
 [222] swamps near the coast, and women systematically turn over
 many acres of black mud in their search for the nut. In east
 Arnhem Land I know of several such swamps, each of which
 [361] supported a hundred or even two hundred Yulengor for six
 [796] weeks at a time. During the corm season the hordes make the
 [574] swamps a rendezvous for corroborees, ceremonies, and initia-
 tions. Corms are about the size of marbles, and in addition
 to being the most nutritious of all their vegetable foods they
 possess a pleasant nutty flavour.

[771] Several foods have totemic significance and find a place
 in ceremonial practices. Probably the most important of
 these is 'ngutu', the nut of the cycad palm, and it is said that
 this yellowish brown nut was first eaten by spirit-Ancestors,
 [773] who instructed their daughters in the art of preparing it.
 [462] Legend declares that as the knowledge was received first by
 [222] women, they have for all time to attend to the gathering
 and cooking of all vegetable foods.

262 Hard-shelled cycad nuts are cracked between stones, and
 252 the kernels soaked in water for three or even five days. Most
 of the poison is thus leached out, and the pulp is wrapped in
 bark and buried in hot sand over which a fire is lit. Cycad
 meal can be baked into flat coarse cakes that sometimes
 weigh up to fifteen pounds, that keep for days, and can be
 carried long distances for use at ceremonial gatherings.
 [574] 'Ngutu' has sustaining properties, and Yulengor live on it
 for weeks as they prepare for inter-tribal corroborees.